



**National  
Transportation  
Safety Board**

# Collaboration To Reduce Trespasser Fatalities?

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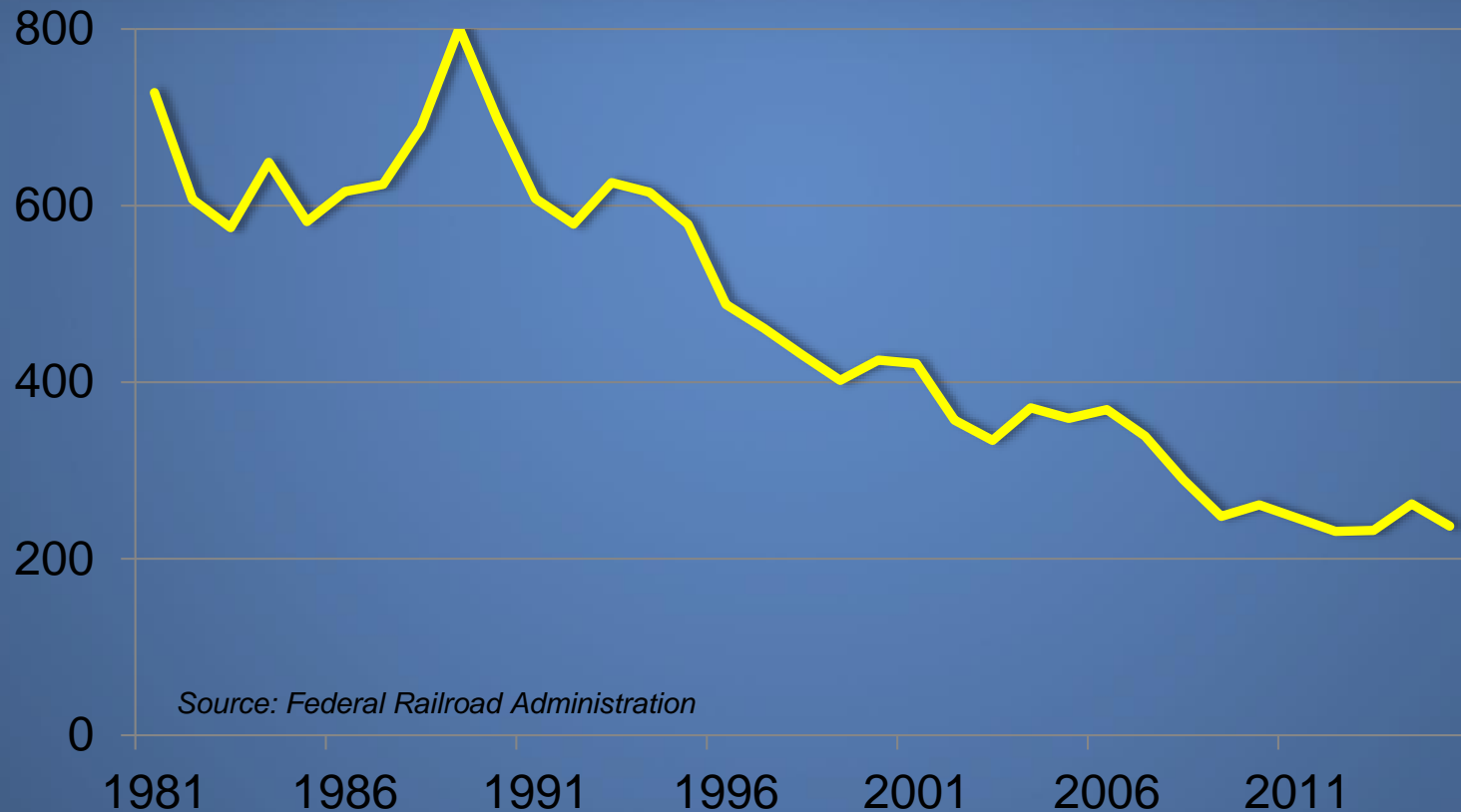
# Outline

- Congratulations
  - Today's Awardees
  - Bonnie Murphy, Operation Lifesaver
- NTSB 101
- The trespasser challenge
- A suggested solution: Collaboration

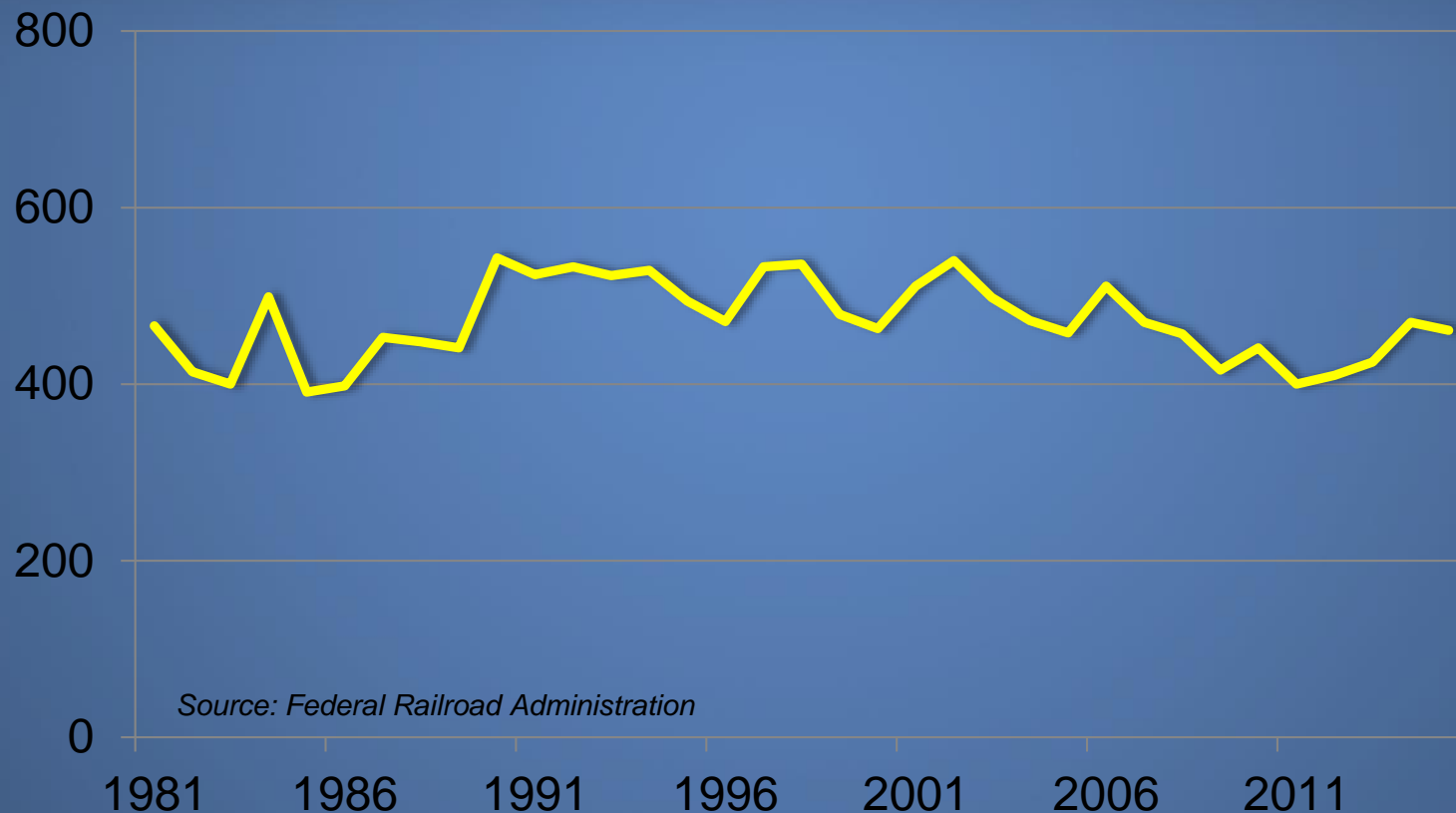
# NTSB 101

- Independent federal agency, investigate transportation mishaps, all modes
- Determine probable cause(s) and make recommendations to prevent recurrences
- Primary product: Safety recommendations
- More than 80% favorably received, even though implementation is not mandatory

# The Good News: Grade-Crossing Fatalities, 1981-2015



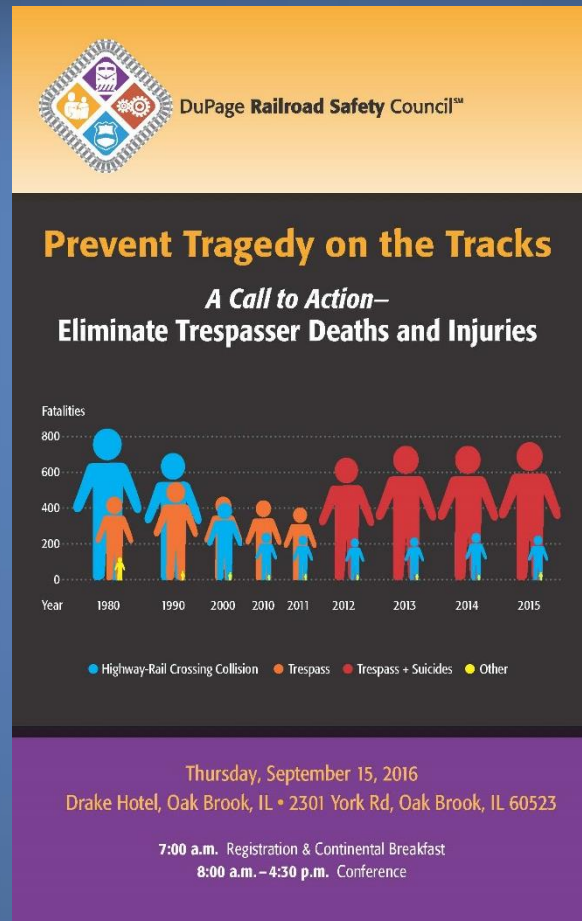
# The Challenge: Railroad Trespasser Fatalities, 1981-2015



# DRSC's Ambitious Goal

*Reduce  
trespassing/suicide fatalities  
by 50% in 10 years*

# Today: The Turning Point?





# Aviation Success: Get Off “Plateau” With Collaboration

- Accident rate declined for decades
- Rate “plateaued” in early 1990’s, many safety experts thought it could not improve further
- Concern: Volume of flying predicted to double in 15-20 years
- Double volume x flat rate = Twice as many crashes
- Public concerned about number of events, not rate
- Solution: Voluntary industry-wide collaboration, Commercial Aviation Safety Team (CAST)



# Collaboration:

Brings all parts of a complex system together to

- Identify potential issues
- *PRIORITIZE* the issues
- Develop solutions for the prioritized issues
- Evaluate whether the solutions are
  - Accomplishing the desired result, and
  - Not creating unintended consequences

# Collaboration Success Story

- 83% decrease in stuck, flat aviation fatality rate, 1998 – 2007

*AND*

- Improved productivity while improving safety, contrary to conventional wisdom

*AND*

- Avoided unintended consequences

*AND*

- Collaboration created no new regulations

# Moral of the Story

Anyone who is involved in the *problem* should be involved in the *solution*

# Challenges of Aviation Collaboration

- Human nature: “I’m doing great . . . *the problem is everyone else*”
- Participants may have competing interests, e.g.,
  - Labor/management issues
  - May be potential co-defendants
- Regulator probably not welcome
- Not a democracy
  - Regulator must regulate
- Requires all to be willing, *in their enlightened self-interest*, to leave their “comfort zone” and think of the System

# Collaboration Transferable?

## – Similarities

- Desire to improve safety
- Solution is not more regulations
- System problem that demands system solution
- Sharing of information is enabled by lack of competition
- Tension between safety and productivity

## – Differences

- Trespassing is intentional wrongdoing; nearly all aviation accidents result from inadvertent error
- Less public concern re trespassing than aviation accidents
- Trespassing remedies are probably local vs. industry-wide

# Sample NTSB Investigation

– Jesup, Georgia, Feb. 20, 2014

- Film crew on tracks
- Train struck a prop, killing 1 and injuring 6
- Location manager had been denied permission twice
- Director pressed on with filming

# Another Sample

- Ellicott City, MD, Aug. 20, 2012
  - Two 19-year-old trespassers
  - Had crossed a short wooden fence onto a trestle
  - Coal train derailed, burying trespassers in coal



# DRSC's 50/10 Goal Will Necessitate...

- Different thinking
- Different enforcement
- Increased outreach
- Better data from medical examiners and law enforcement
- *Tackling suicide*

# Suggested Beta Test

- Select troublesome “hot spot”
  - Nagging problem for many years
  - Many interventions have been tried, not successful
  - Interventions have not been system solutions to address system problems
  - Less defensiveness because focused on trend rather than single event
- Select collaborative corrective action group, all who have a hand in the process
  - Carriers?
  - Law enforcement?
  - Mental health community?
  - Regulators?
  - Others?
- Have collaborative corrective action group pursue process such as that described in FRA’s Community Trespass Prevention Guide

# Conclusions: Collaboration

- Can help generate innovative and effective solutions for safety issues in complex systems
- Can help ensure that safety improvement programs also improve productivity, making safety improvements more sustainable
- May provide the sought after “Turning Point”

# Thank You!!



## *Questions?*



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